

Redefining technology in libraries and schools: AASL best apps, best websites, and the SAMR model

By: Melissa Jacobs-Israel and [Heather Moorefield-Lang](#)

Jacobs-Israel, M., & Moorefield-Lang, H.M. (2013). Redefining technology in libraries and schools: AASL best apps, best websites, and the SAMR model. *Teacher Librarian*, 41(2), 16-18.

Made available courtesy of E L Kurdyla Publishing LLC and Teacher Librarian:
<http://teacherlibrarian.com/>

*****© E L Kurdyla Publishing LLC. Reprinted with permission. No further reproduction is authorized without written permission from E L Kurdyla Publishing LLC. *****

Abstract:

Students can have varying levels of engagement with technology in the classroom. At what level is technology being used to enhance student learning, and at what level is it being used to truly transform education? The authors of this article introduce the American Association of School Librarians new Best Apps and Best Websites list, created each year with free educational resources. The Substitution Augmentation Modification Redefinition (SAMR) model will also be discussed, along with how sites and apps from AASL's lists can be integrated with the levels of this model.

Keywords: school libraries | Substitution Augmentation Modification Redefinition (SAMR) | education technology | education apps

Article:

*****Note: Full text of article below**

FEATURE ARTICLE



"Over the years, various sites that have been recognized by AASL Best Websites have the ability to fit all levels of the SAMR model."

Redefining Technology in Libraries and Schools

AASL Best Apps, Best Websites, and the SAMR Model

MELISSA JACOBS-ISRAEL AND HEATHER MOOREFIELD-LANG

Abstract: Students can have varying levels of engagement with technology in the classroom. At what level is technology being used to enhance student learning, and at what level is it being used to truly transform education? The authors of this article introduce the American Association of School Librarians new Best Apps and Best Websites list, created each year with free educational resources. The Substitution Augmentation Modification Redefinition (SAMR) model will also be discussed, along with how sites and apps from AASL's lists can be integrated with the levels of this model.

In 2008, the American Association of School Librarians (AASL) formed a new committee, Best Websites for Teaching and Learning. The charge of the committee was to curate websites and resources in education of the highest caliber that were inquiry-based and online tools. This committee also had to focus on sites that were in line with AASL's *Standards for the 21st Century Learner*. In the summer of 2009, the AASL Best Websites for Teaching and Learning Committee presented its first list of twenty-five winning websites. For the past five years, this group offers a list of twenty-five innovative websites that encourage such qualities as creativity, collaboration, participation, and advancement. All sites are free, user-friendly web-based tools that promote critical thinking and encourage users to explore, learn, and grow. Committee members spend each year reviewing approximately one hundred sites before choosing the final twenty-five. In June 2014, this group will present their 150th site. To view the winners, visit <http://www.ala.org/aasl/standards-guidelines/best-websites/2013>.

The popularity of Best Websites has grown continuously over the years. Teachers, librarians, administrators, and others in the field of education and academia look to the list for guidance and ideas for online educational tools. Committee members knew that hand-held technologies, apps, and tablets were going to continue to rise starting in 2010. With the increase in applications between Android and iOS devices, members of the Best Websites committee approached AASL with a proposal to expand the brand originated by the Best Websites Committee for a Best Apps for Teaching and Learning Committee in 2011. The proposal was accepted, and in 2013 the inaugural list of Best Apps for Teaching and Learning was released at the AASL annual conference in Chicago, Illinois. To see the Best Apps winners for 2013, visit <http://www.ala.org/aasl/standards-guidelines/best-apps/2013>.

With a vetted list of Best Websites and now Best Apps in place, educators now have a reliable source for innovative ideas and recommendations for online tools and device ap-

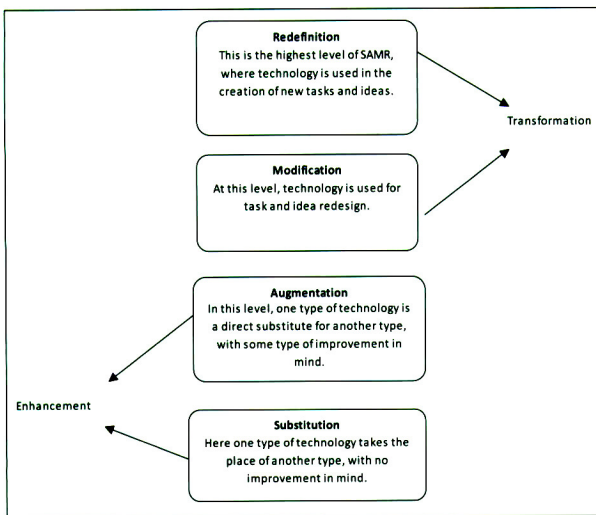
plications. But how are these technologies being implemented? Are these tools being used to their maximum potential? And what impact do these technologies have on teaching and learning? The Substitution Augmentation Modification Redefinition (SAMR) model helps users and educators investigate those questions.

THE SUBSTITUTION AUGMENTATION MODIFICATION REDEFINITION (SAMR) MODEL

The SAMR model, created by Ruben R. Puentedura, was developed to help librarians, educators, and others thoroughly examine the levels at which they are using technology with their students and in their educational practice (Puentedura, 2013).

To the right is an example of the model (Puentedura, 2013).

An example of a task going through the various stages might be the following. The librarian for an elementary school has asked students to discuss their favorite book in class. This is a project that could take one class session or multiple sessions depending on the topic. At the substitution level, students would present their book review or book commercial using a digital camera to show another group of students. This is the level of enhancement, where one kind of technology replaces another.



At the augmentation level, students would create book reports or discussions using a website such as Zooburst to create three-dimensional pop-up books to tell about their favorite books and possibly discuss them. As in the substitution level, the project at the augmentation level simply enhances the technological experience but does not involve creation at the transformational level.

In the modification level, where users are now at the transformation level, librarians would have students working collaboratively to create an Animoto slide show about their favorite books to be shown for parent night or books fairs. Here technology has been integrated at a level of transformation that allows for innovation and creation. In the final level of redefinition, students could create interactive videos with the augmented reality app Touchcast, which includes filming the students and integrating websites, audio, external video, and much more (Kharbach, 2012).

BEST WEBSITES AND THE SAMR MODEL

The AASL Best Websites for Teaching and Learning Committee has been recognizing high-achieving sites in the areas of educa-

tion and librarianship for five years. The committee has now distinguished 125 sites for teachers and librarians to incorporate into their educational practice. Integration of technology is key. It is important for librarians and teachers to have a plan, know their students and their instruction, and recognize which technologies will best enhance and transform their teaching. The technology cannot guide the instruction; the lesson has to be planned with the technologies blended within the lesson. The SAMR model works well with this idea.

Over the years, various sites that have been recognized by AASL Best Websites have the ability to fit all levels of the SAMR model. For example, Quicklyst (<https://quicklyst.appspot.com/>), an online note-taking tool, could be used at the substitution level; students could move from taking notes via pencil and paper to taking notes online. But Quicklyst also moves into the augmentation level. This site not only allows for online note taking but also lets students read the notes via their iPads, Nooks, Kindles, and other Android devices. So while the notes could be taken in class on a laptop, they could also be read on multiple other devices and shared with peers.

In the area of digital storytelling, AASL Best Websites has recognized many sites over the years, such as Storybird (<http://storybird.com/>), an artistic, interactive storytelling tool, and Zooburst (<http://www.zooburst.com/>), a 3-D pop-up book creation site. Each year the list is moving on to more interactive and dynamic sites, such as Inanimate Alice (<http://www.inanimatealice.com/>), a digital, interactive graphic novel, and Inkewriter (<http://www.inklestudios.com/inkewriter/>), where users create and share collaborative stories. Each of these online tools progresses from writing a story through the SAMR model, from substitution to writing a story using a piece of technology or online tool, to the augmentation of making it 3-D and a pop-up, to the modification level of collaboration, to making something redefined and new with Inkewriter, where students are creating their own pieces, collaborating, sharing with a broader audience, and creating story starters that other students can pick up and finish as well.

These are only a few examples from the AASL Best Websites; with 125 vetted sites, there are plenty of opportunities for librarians and their peer educators to try various technologies at every level of the SAMR model.

AASL BEST APPS AND SAMR MODEL

AASL extended the brand developed by the Best Websites Committee to address the growing demand for vetted apps and mobile technologies in education. The AASL Best Apps for Teaching and Learning honors apps that add exceptional value to inquiry-based teaching and learning as embodied in the AASL *Standards for the 21st-Century Learner*. The twenty-five selected apps on the 2013 inaugural list offer innovative and engaging learning experiences for students and provide opportunities for deep inquiry, critical thinking, and content creation.

The integration of apps in instruction is still somewhat in a stage of infancy. As such, the use of the SAMR model is quite effective in helping educators measure how



PICTURE BOOKS

THE IMPORTANT THINGS IN LIFE!

Cammuso, Frank with Jay Lynch. **Otto's Backwards Day.** Toon. 2013. 32p. \$12.95. 978-1-935179-33-7. Grades 2-3. Someone has stolen Otto's birthday and he is driven to get back all the important things—cake, presents, balloons, and ice cream. With the help of robot Toot, Otto finds his way into a world filled with palindromes. They fit right in with their names and travel around via race car and kayak to find the birthday thieves. In the end, Otto comes home to discover the truly important thing—his family—and to celebrate his birthday.

Deacon, Alexis. **Cheese Belongs to You!** Candlewick, 2013. 32p. \$15.99. 978-0-7636-6808. Grades K-3. Learn the "rat law" and know that, in the hierarchy, the cheese belongs to the ever more threatening rat. That is until all the rats start fighting. The smallest rat who starts with the cheese finally ends up being able to offer to share and everyone sits down to a long table of friendly rodents, each eating some cheese.

Litwin, Eric. **Pete the Cat and His Four Groovy Buttons.** Illus. by James Dean. HarperCollins, 2012. 32p. \$16.99. 978-0-06-211058-9. Grades PreK-2. Happy-go-lucky Pete has a great shirt with four groovy buttons that, one-by-one, fall off. Does he cry? No, he goes on singing as the subtraction of 4 minus 1, etc. is displayed. In the end, he has only his belly button. Stuff comes and goes but it's all good in this Geisel honor book.

Woodson, Jacqueline. **Each Kindness.** Illus. by E.B. Lewis. Putnam, 2012. 32p. \$16.99. 978-0-399-24652-4. Grades K-3. Chloe refuses the friendly outreach of the new student, Maya, called "Never New" because of her hand-me-down wardrobe, until the teacher talks about the rippling effect of actions. Unfortunately, Chloe has changed her mind a little too late as Maya has moved on to another school. A wonderful example to share with children about the importance of their actions.

they incorporate apps in their teaching and learning experiences. For example, in the substitution stage of SAMR, students may learn how to use the app Evernote (<http://www.evernote.com>) to take notes and makes lists. At this level, there may be no alteration in a student's note-taking experience, and Evernote may just be used as replacement for pen and paper. At the augmentation stage, however, students may enhance their note-taking experience by adding photographs, voice recordings, and tags within Evernote. At this stage, there is purposeful enhancement of the app technology.

At the transformational level, technology is used to modify and redefine tasks. For example, in Kidblog (<http://kidblog.org>), students can become authors. Instead of a written report, Kidblog allows students to use blogging technology to share content, communicate, and work collaboratively to publish their ideas. As such, the technology allows for a significant idea redesign. At the highest level of SAMR, redefinition, technology is used in the creation of new ideas and tasks. An example of redefinition is having students use the app Toontastic (<http://launchpad-toys.com/toontastic>) to create their own animated cartoons, animate concepts, and share ideas.

CONCLUSION

Mobile technology, apps, and websites are becoming more accessible and prevalent in classrooms and libraries around the world. As such, professionally vetted and curated lists such as AASL Best Websites for Teaching and Learning and AASL Best Apps for Teaching and Learning add exceptional value to instruction and educators' ability to engage students with technology. Together with the SAMR model, educators can effectively scaffold the necessary skills to take students through the stages of technology integration and adoption, helping them become creators of their own knowledge.

REFERENCES

Kharbach, M. (2012). SAMR model explained for teachers. Retrieved from <http://www.educatorstechnology.com/2013/06/samr-model-explained-for-teachers.html>

Puentedura, R. R. (2013, September). Ruben R. Puentedura's weblog: Ongoing thoughts on education and technology. Retrieved from <http://www.hippasus.com/rtpweblog/>

Melissa Jacobs Israel is a coordinator in the Office of Library Services for the New York City Department of Education. In that role, she has created the New York City School Librarian Information Sharing Tool (NYCSLIST) listserv, which hosts over 1,000 school librarians. She serves as chair of AASL Best Apps for Teaching and Learning Committee, a member of AASL Common Core Task Force, and president-elect of the School Library System Association of New York State. She enjoys exploring emerging technologies, apps, social media, lifelong learning, and obsessively collecting cookbooks. Connect with her @missyji or e-mail her at mjacobs7@schools.nyc.gov.

Heather Moorefield-Lang is the education and applied social sciences librarian at Virginia Tech. She is chair of the AASL Best Websites for Teaching and Learning Committee. The focus of her research is technology and arts in libraries and education. To see more of her work, visit her website at www.actingintheibrary.com. Follow her on Twitter at @actingintheib or e-mail her at hmlang@vt.edu.